LAND USE, TRAFFIC/CIRCULATION, AND UTILITIES

UTILITIES

Folsom Lake State Recreation Area

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by

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List of Figures

UTILITIES

Introduction

Psomas prepared this summary to describe the existing utility infrastructure within the Folsom Lake State Recreation Area (Unit). The purpose of this summary is to:

- Document the existing water, sewer, electric, and telephone utilities that service the Unit.
- Identify major non-California Department of Parks and Recreation (CDPR) utility easements throughout the Unit.
- Identify issues and impacts related to the non-CDPR utility easements.

The existing utility infrastructure within the Unit consists of CDPR-owned systems that provide water, sewer, electricity, and telephone service to some of the day use areas, campgrounds, access points, and other CDPR and Bureau of Reclamation (BOR) facilities. In collecting an inventory of the existing CDPR-owned utilities, Psomas staff researched Unit as-builts, field-inspected Unit areas, and interviewed employees from the Gold Fields District. This section contains a general description (as well as approximate locations) of the utilities included in the inventory. Many Unit as-built plans were incomplete or missing; therefore, exact locations, types, and sizes of CDPR-owned utilities could not be verified for most of the Unit facilities.

This section also documents major non-CDPR utility corridors and easements within the Unit. Several companies and agencies [including PG&E, Sacramento Municipal Utility District (SMUD), Western Area Power Association (WAPA), San Juan Water District, El Dorado Irrigation District, the City of Folsom, and the City of Roseville] own utility lines that cross CDPR and BOR properties. This section discusses the approximate location of the utility easements and the impacts of these corridors on the Unit.

Description of Existing Utilities

District Headquarters/Bureau Offices

CDPR Gold Fields District and BOR share a common Headquarters compound. This compound is located at the corner of Folsom Dam Road and Folsom-Auburn Road, and includes maintenance buildings, staff office space, and the American River Water Education Center. If a new bridge and crossing is built to replace the Dam Road as a public roadway, both CDPR and BOR would require the development of a new administration building and other facilities. Preliminary conceptual planning has been conducted on possible locations for such new development. Most CDPR and BOR facilities are currently connected to public utilities (Keith Stallcop. 2002.). Both water and sewer facilities are connected to service lines from the City of Folsom on Folsom-Auburn Road. Electric utilities are provided by SMUD, WAPA and Pacific Gas & Electric (PG&E). Telephone service is also available. No natural

gas connections are provided; however, propane is used to heat water used for showers and restrooms.

Observation Point

Observation Point contains a large parking lot with a kiosk overlooking the dam and lake. The parking lot is used primarily by fishermen. However, since September 11, 2001, the parking lot has been closed due to security reasons, as it is the nearest access point to the dam. Some members of the public have suggested that a restaurant or meeting facility be constructed at Observation Point; however, no plans for such development have yet been established.

Currently, Observation Point has no on-site water, sewer, or telephone utilities (Keith Stallcop. 2002.). If development of this area is proposed, water and sewer utilities could be extended from City of Folsom main lines on Folsom-Auburn Road or East Natoma Road. The parking lot obtains electricity from Western Area Power via lines from Folsom Prison.

Beals Point

Beals Point offers tent and recreational vehicle (RV) camping, with approximately 69 campsites, including 20 RV campsites with electrical hookups. Day use facilities include parking, flush toilets, picnic tables, swimming beaches, and a dirt launch ramp. Food concession and boat rentals are located next to the designated swimming beach.

Beals Point is connected to public utility systems (Keith Stallcop. 2002.). The Placer County system provides sewer service, and the San Juan Water District provides water service. Water and sewer lines extend from Folsom-Auburn Road to the campground's two restrooms and showers, the food concession, the restroom next to the food concession, and the restroom in the day use parking area. PG&E provides electricity. Electric lines extend to the restrooms, the food concession, and the RV campsites. A telephone line extends to the kiosk, the lifeguard tower, and the food concession. No natural gas service exists at the facility. Electric hot water heaters generate hot water for the showers, restrooms, and food concession. Propane gas heaters generate hot water for the RV sites. The site utilizes an existing sewer lift station at the food concession and two existing sewer lift stations in the campground.

Granite Bay (includes Oak Beach, Beeks Bight, Dotons Point)

The most popular day use facility in the Unit is Granite Bay with a series of facilities spread over three distinct subareas. The Main Beach area includes a 1,200-foot-long guarded swim beach, snack bar, beach equipment, concessions, restrooms, picnic areas, activity center, and parking areas. The North Granite area includes an informal beach area at Oak Point, equestrian staging area, Dotons Point, and Beeks Bight. The main boat launch facilities on Folsom Lake are located on Granite Bay, just south of the Main Beach area. These facilities are designed for powerboat, personal watercraft (jetski), and sailboat launching and include paved and demarcated ramp lanes and parking, picnic ramadas and restrooms.

Granite Bay provides several public utility connections (Keith Stallcop. 2002.). Three restrooms at the Main Beach and one restroom at the Stage 4 boat ramp at the Granite Bay Boat Launch are connected to public water system. The San Juan Water District provides water service. The sewer for these facilities connects to a leach field system. CDPR is

currently adding another restroom at the 5 percent boat ramp at the Granite Bay Boat Launch, which will also be connected to the public water and leach field systems. Currently, four sewer lift stations exist in Granite Bay—one for each of three day-use beach restrooms and one for the Stage 4 boat ramp restroom. The 5 percent boat ramp bathroom will also have a new lift station.

Electricity and telephone service exists at the entrance kiosk, residence, shop, and concession stand located near the Main Beach area. The restrooms at the activity center, day-use beach, and Stage 4 boat ramp all have electricity. All of the boat ramps have both electricity and lighting.

The residence, shop, and kiosk bathroom are connected to San Juan Water District services. The sewer for these buildings connects to a septic tank and leach field system, which consists of two leach fields—one north of the residence and one south of the residence.

No public utilities are available at the horse staging area, Oak Beach, Beeks Bight, or Dotons Point. CXT vault toilets are provided at Oak Beach, Beeks Bight and Dotons Point, and a porta-potty is provided at the horse staging area. Since the horse staging area is near a residential area, a restroom constructed at this location could be connected to public utilities. Oak Beach, Beeks Bight, and Dotons Point could be connected to public utilities; however, the sites are remote and would require sewer lift stations and extensive piping.

Horseshoe Bar (Sterling Point, Eden Rock)

The Horseshoe Bar area is an informal access point to the Unit, which does not contain any utilities or restrooms (Keith Stallcop. 2002.). Since neither CDPR nor the BOR own the parcel at the end of Horseshoe Bar Road, this area is not considered a CDPR access point into the Unit.

Rattlesnake Bar

Rattlesnake Bar is used primarily as a boat launch ramp, and no public water or sewer utilities are available (Keith Stallcop. 2002.). CDPR installed a water system (a well plus a 35,000-gallon storage tank) to support a residence formerly in use at this site; however, this system is no longer in operation. Porta-potties and a CXT vault toilet are available in the parking lot. The entrance kiosk includes telephone and PG&E electrical service. Electrical lines also extend to the well and to the lights in the parking lot.

If facility development is proposed for this site, the existing well water system would require renovation. The steep topography in the area limits the possibility for installation of a sewer leach field; however, the old trailer pad by the parking lot may accommodate a smaller leach field.

Peninsula

The Peninsula area is largely undeveloped. The Peninsula facility includes a campground with 104 campsites, five restrooms, two boat ramps, and a small amphitheater for group use. Seasonal housing for four CDPR employees and a small maintenance yard are located nearby. The north launch ramp has a boat launch with day use facilities and a small beach. The Peninsula Campground offers 104 campsites, a boat launch, and flush toilets.

The Boat Launch area does not have a sewer system (Keith Stallcop. 2002.); however, porta-potties are available in the parking lot. Sufficient land area is available in the vicinity of the Boat Launch area for construction of a septic tank and leach field system. Since the groundwater table is high in the area near the lake, the leach field may require a more uphill location. An uphill leach field system would require a sewer lift station and electricity; electrical utilities could be extended from a main line at the Peninsula Campground. If a suitable leach field site is unavailable, waste from the boat launch area could be pumped to the Peninsula Campground system. Pumping would require a lift station, electricity, and a new sewer force main.

The Boat Launch area contains a small well, which supplies irrigation water for parking lot landscaping. This well could possibly be expanded to provide water for flush toilets. A new water main could also be constructed to transport water from the Peninsula Campground.

The Peninsula Campground contains a complete potable (disinfected with chlorination) water system (Keith Stallcop. 2002.). This system, which pumps well water into a 50,000-gallon water storage tank, was revamped in 2002. The system delivers water to five existing restrooms with flush toilets and various drinking fountains throughout the campground.

The Peninsula Campground sewer system consists of a collection system and a leach field. The restroom waste is gravity fed to a lift station. A 3-inch sewer force main conveys the waste from the lift station to a leach field, which is located between the residences and a shop southeast of the campground. In the early 1990s, CDPR renovated a portion of the sewer collection system; however, the sewer lift stations require revamping due to their age and poor condition.

CDPR would like to add showers in the campground if possible. If showers are added, the existing pipes in the water system may require replacement by larger diameter pipes. The sewer leach field system may also require expansion.

Skunk Hollow (Lower Half of the South Fork River)

Skunk Hollow is used primarily by private whitewater boaters (kayaks and rafts) as a river take-out point. Skunk Hollow facilities include a small paved parking area, a raft loading zone with drying rows, a paved path (roughly 15 feet wide) from the river to the parking areas, and several picnic tables.

No public utilities are available at Skunk Hollow. Two CXT vault bathrooms (approximately 4 years old) are provided at the end of the parking lot. If CDPR wants to add a water system, a well could be developed. Although insufficient space exists for construction of a leach field, waste could be gravity fed to Salmon Falls where a leach field could be installed. Electrical utilities could be added, but new lines would extend several miles to the nearest connection.

Salmon Falls (Lower Half of the South Fork River)

Salmon Falls is located just west of Skunk Hollow. This site is primarily used by commercial whitewater boaters, non profit boating organizations, fisherman, and mountain bikers. Facilities include a large area for parking and queuing, informal take-out areas, four vault toilets, and drinking water. The parking area includes two lots;commercial boaters and busses

are restricted to the east parking lot. Both parking lots are old, and CDPR wishes to reconfigure the layout if possible, possibly adding a staging lane for the unloading of boats as well as more parking.

No public water or sewer utilities are available at Salmon Falls. The parking lots contain two CXT vault bathrooms. If CDPR would like to add a water system, a well could probably be developed. A leach field system for flush toilets could possibly be installed; however, space is limited. Electrical utilities could be added, but new lines would have to extend several miles to the nearest connection.

Telephone service is available; however, CDPR has discontinued maintenance of the phone due to frequent vandalism.

Sweetwater Creek

The Sweetwater Creek area is an informal, undeveloped access point to the Unit used as trailhead parking. There are no utilities or restrooms at this site.

Old Salmon Falls (Falcon Crest, Jacks Shack, Monte Vista)

The Old Salmon Falls area includes the old Monte Vista Campground, the Ponderosa pine plantation, a beach access site, and trailhead parking. Informal parking is also located at Falcon Crest, just off Salmon Falls Road. The parking area contains a horse trough and drinking fountain, but no other utilities. This site is informally used as a horse staging area, although it is not a formal CDPR access point to the Unit and actually contains "No Parking" signage.

The old Monte Vista Campground is accessed from the Falcon Crest informal parking lot via a ¼-mile-long dirt trail. CDPR has considered using the old campground area for a group camp or environmental camp.

A partially paved access road off Salmon Falls Road leads down to the Old Salmon Falls parking lot. The lot provides beach and trail access and parking. The lot is unpaved and not well known. The Ponderosa pine plantation is accessed from the Old Salmon Falls parking lot.

The old Monte Vista campground (which is no longer being operated) does have a drinking fountain but no septic system. If development is proposed in this area, electrical and telephone utilities could possibly be extended from El Dorado Irrigation District service lines near the Falcon Crest area. Installation of a septic tank and leach field system would be required.

No public utilities are available at the Old Salmon Falls parking lot; however, a porta-potty is available. Insufficient area exists for installation of a leach field at the site. If development is proposed in this area, water, electric, and telephone utilities could be extended down from the Falcon Crest area. Pumping of sewer waste to a suitable leach field site, possibly near the old Monte Vista Campground, would be required. As the road to the Old Salmon Falls area is privately owned, CDPR would need an easement to construct utility lines at this location.

Browns Ravine

Browns Ravine contains the only Marina on the Lake. Facilities at Browns Ravine include 685 wet slips, 175 dry storage slips, two launch ramps, flush toilets in the restrooms, day use parking, and a small Marina store. The concessionaire wishes to increase the number of boat slips, as a 9- to 10-year waiting list reflects an increased demand. The concessionaire has reported that, because of the proximity of the upper launch ramp to the day use parking, the day use parking entrance is often blocked by the queue for the ramp. Construction of a more effective waiting lane and turnaround could alleviate this conflict. The California Department of Boating and Waterways has determined subsurface storm drains are required to remove standing water in the parking lot. A culvert on the entrance road is also undersized, creating flooding in the parking areas. The concessionaire has proposed the creation of more boat slips, increased parking, and additional restrooms at the Marina to accommodate Unit visitors.

Browns Ravine is connected to public utilities. Water and sewer system lines extend from the El Dorado Irrigation District systems off Green Valley Road. Electrical and telephone service is available; however, natural gas is not available. As mentioned above, two restrooms are provided in the parking lots; however, no showers are provided. If additional restrooms are installed or showers are added, the water and sewer pipes from Green Valley Road may require enlargement.

Mormon Island Wetlands Natural Preserve

The Mormon Island Wetlands Natural Preserve is a dense riparian woodland and wetland area. CDPR is considering ways to facilitate access to the Mormon Island Wetlands as the existing trail is overgrown. Facilities are not provided in the Preserve's informal parking area.

No water or sewer facilities are available at the existing parking area (Keith Stallcop. 2002.). Existing utilities are located adjacent to the existing parking lot. However, CDPR could potentially hook up existing public utilities located on Green Valley Road or a nearby subdivision.

Folsom Point

Folsom Point is a day use area with a swimming beach and a boat launch ramp. Facilities include two CXT vault toilets in the day use area and porta-potties in the launch ramp parking lot. In 2002, the Gold Fields District installed a 3-inch water main and a new sewer line within the entrance road into the Unit (Keith Stallcop. 2002.). These utilities are hooked up to City of Folsom utility lines on East Natoma Road. The new water and sewer lines extend to the kiosk and the new bathrooms currently under construction at the launch ramp. CDPR could extend these lines into the day use area. Since Folsom Point is lower in elevation than the entrance road, sewer lift stations were installed to transport the sewer back to East Natoma Road. Electrical service is provided to the kiosk on the entrance road.

Negro Bar

Facilities at Negro Bar include a swim beach, flush toilets, boat rentals, day use facilities, a group campground, horse staging area, paved parking, trail head access, a small "cottage"

currently used for administrative purposes, and a small boat launch. Paved trails that are part of the American River bike trail system also permit access for emergency vehicles. The Rainbow Rocks area of Negro Bar has a small paved parking area that is currently closed to vehicles.

Potential improvements could include redesign of the facilities near the Rainbow Rocks area and enhancement of facilities in the group campground and boat launch parking areas. The amount of paved parking provided in these areas far exceeds use. CDPR is investigating the interpretative opportunities of the "cottage," including an environmental camp area and a center for African American history and mining in the region.

Public utilities are available at Negro Bar (Keith Stallcop. 2002.). Water and sewer main lines hook up to City of Folsom lines on Greenback Lane. These lines extend to the bathrooms at the swim beach parking lot. The water line also extends to the group campground and the "cottage." The group campground and "cottage" are on leach fields. PG&E electrical service is available to the "cottage," kiosk, and swim beach bathrooms; telephone service is available to the kiosk and "cottage." Natural gas is not available. The cottage has a propane tank.

Public utilities are not available at the Rainbow Rocks swim or boat launch areas. A CXT vault toilet is provided at Rainbow Rocks. A floating vault toilet is provided at the boat launch.

If development is proposed at Negro Bar, public utilities could easily be extended throughout the area. Lift stations currently exist near the swim beach restroom and along the main entrance road. However, lift stations would be required to transmit waste up to the main collection at Greenback Lane. The "cottage," group campground, and other areas would also require sewer lift stations to connect these sites to the public sewer system.

Snipes Pershing Ravine

The Snipes Pershing Ravine, a recent CDPR acquisition, includes most of the watershed of a small creek that empties into Lake Natoma just east of Mississippi Bar. If development is proposed in this areas, CDPR could potentially hook up to existing utilities in the adjacent subdivisions.

Mississippi Bar

Mississippi Bar is an old mining site, used by Teichert Aggregates and dredgers during historic gold mining. Throughout the area, large piles of tailings are interspersed with ponds and pockets of vegetation. The paved bike path along the northwest shoreline of Lake Natoma runs across the Bar, and several dirt trails traverse the area. The Shadow Glen Riding Stable concession is located on the north side of the Bar.

If development is proposed here, CDPR could potentially hook up to utility lines near the Shadow Glen Riding Stable. Well water is already available here and electricity and telephone service is available from new facilities at the Stable. The Stable's sewer system consists of a septic tank and leach field. Sewage would require pumping to the sewer lines of adjacent subdivisions or into a new leach field. A main line owned by the Fair Oaks Water District could provide water service.

Lake Overlook

The Overlook offers views of Lake Natoma, the foothills, and the surrounding valley. Facilities here include a paved parking area, an unpaved parking area (horse staging area and trailhead), and a porta-potty. No water, sewer, or other facilities are available at the Overlook (Keith Stallcop. 2002.). CDPR staff have expressed interest in a plan to better utilize this site.

If development is proposed at this site, CDPR could potentially hook up to utility lines on Hazel Avenue or subdivisions to the north. The Fair Oaks Water District would provide water service. Due to the elevation increase up to the Overlook, a water booster station may be required to transport water to the site. Sacramento County could provide sewer service. According to Sacramento County, the sewer lines in this area are at or near capacity. CDPR would have to provide the County with projected visitation and facility size in order to determine if public sewer service is possible. Alternatively, CDPR could install a leach field.

Nimbus Shoals

Nimbus Shoals is a small site, located just below Nimbus Dam, that is used primarily for fishing. CDPR staff have expressed interest in redesigning the parking area to limit vehicle access on the gravel bar and to protect the riparian vegetation.

No water, sewer, or other facilities are available here. A porta-potty is provided in the parking lot. If development is proposed at this site, CDPR could easily hook up to utilities on Hazel Avenue. However, Sacramento County has indicated that the public sewer system in this area is at or near capacity. CDPR will have to provide the County with projected visitation and facility size in order to determine if public sewer service is possible. Alternatively, CDPR could install a leach field in the vicinity of Nimbus Shoals provided site specific tests were performed to determine an adequate leach field location.

Aquatic Center

The Aquatic Center on Lake Natoma is operated by California State University, Sacramento (CSUS). The Aquatic Center offers a variety of boating classes and boat rentals, and is used by the CSUS rowing teams, high school rowing clubs, and a masters rowing club. Water, sewer, electricity, natural gas, and telephone utilities are available. The Sacramento Municipal Utility District provides electrical service. PG&E provides natural gas service. Pacific Bell provides telephone service.

Arden Cordova Water Service provides water via a 2-inch water line. The Arden Cordova Water Service has stated that the service was only meant to provide water to the Aquatic Center and should not be used for other facilities without special approval (Scott Fort. 2003.). CDPR installed a larger water line after the 2-inch connection; however, the 2-inch point of connection limits its ability to provide adequate service to fire hydrants or to additional facilities. Additional service connections will likely require a service connection larger than the 2-inch tie-in. If CDPR would like to have fire flow at the facility (for un-sprinklered buildings), the installation of a booster station or a separate waterline for fire hydrant connections into the Arden Cordova water main will likely be required.

Sewer service is connected to the Sacramento County system. Sacramento County has indicated that the public sewer system in this area is at or near capacity (Jeff Atterberry.

2003.). CDPR will have to provide the County with projected visitation and facility size in order to determine if additional or expanded public sewer services are possible. The County has expressed concerns that the existing sewer system may not be able to handle the increased sewer flows associated with the use of the site as an Olympic event station. CDPR should consult with Sacramento County on any future facility expansion plans.

Nimbus Flat

Nimbus Flat is a popular day use area located along Lake Natoma near the Aquatic Center. Facilities include two small unguarded beaches, an observation area, personal watercraft dock, two restrooms, and parking. In addition, this area includes two employee residences and a maintenance shop. The two restrooms in the day use area and the bathroom at CDPR maintenance shop are connected to public water and sewer systems. The two residences and mobile home are on well water and septic tank/leach field systems. Electricity and telephone service are available at the site.

CDPR is currently engaged in the process of transferring the residences and mobile home to public water and sewer service. No natural gas is currently available; however, natural gas lines could possibly be extended from PG&E main lines near the Aquatic Center. Propane hot water systems currently rely on propane tanks.

Sacramento County has noted that the sewer service in this area is at or near capacity. CDPR will have to provide the County with projected visitation and facility size in order to determine if additional or expanded public sewer services are possible. The County has expressed concerns that the existing sewer system may not be able to handle the increased sewer flows associated with potential increased use of the site. CDPR should consult with Sacramento County on any future facility expansion plans.

Willow Creek/Museum Flat

The Willow Creek site offers day use facilities, a small boat launch, gravel parking areas, and a vault toilet. Currently, no public utilities are provided at the site. However, CDPR could potentially hook up to nearby public utilities at Folsom Boulevard.

Museum Flat is a relatively level, grassland area located near Highway 50 and Folsom Boulevard. Proposals have been made to locate a State Native American museum at the site. If development is proposed, CDPR could easily hook up to public utilities on Folsom Boulevard.

Folsom Powerhouse State Historic Park

The Folsom Powerhouse is one of the oldest hydroelectric facilities in the world. Facilities include lake access (via a trail), picnic facilities, a museum, a gift shop, and small parking areas. The City of Folsom provides public water and sewer service for the bathrooms at this site. Electricity and telephone service are also available at the site.

Utility Easements Through the Unit

Several companies and agencies own utility lines that pass through the Unit (see Figure U-1a and Figure U-1b). CDPR and the BOR have granted easements for these utilities to the utility owners. Easements provide the utility owners with permanent and guaranteed access to pipelines or transmission lines for maintenance and repair purposes. Typically, CDPR and BOR are not responsible for maintenance of these easements (e.g., clearing overgrown vegetation, making pipe repairs, or other maintenance activities).

Development cannot occur within existing utility easements. With special approval, new roads and utilities can traverse existing easements. The expansion plans of two utility owners—the San Juan Water District and the El Dorado Irrigation District—may affect future Unit land use. Each utility owner adopts its own policy for vegetation removal, tree trimming, and easement maintenance. These policies may not be consistent with those of CDPR. Therefore, CDPR should communicate its policies for vegetation removal, resource protection, and fire fuels management with utility owners.

Entities with major utility easements include:

- PG&E
- City of Roseville
- San Juan Water District
- Western Area Power Administration (WAPA)
- Sacramento Municipal Utility District (SMUD)
- El Dorado Irrigation District
- City of Folsom

PG&E Easements

Pacific Gas & Electric Company (PG&E) owns and maintains a 115-killivolt (kV) electric tower line known as the Placer-Goldhill line. This line extends between Folsom Lake and Auburn Folsom Road from north of Rattlesnake Bar Road to the Sacramento area. The 115-kV line passes through the Unit in the Rattlesnake Bar and Granite Bay areas. There are no planned expansions for this line.

PG&E also operates a small hydroplant, the Newcastle Powerhouse, at the end of Newcastle Road off Rattlesnake Road just east of Rattlesnake Bar. The hydroplant generates power using extra water from the Placer County Water Agency raw water canals. PG&E does not operate the plant at full capacity year-round due to limited supply at certain times of the year. PG&E has no plans to expand this plant (Bill Snyder. 2003.).

Figure U-1a: Utility Easements (Folsom Lake)

Figure U-1b: Utility Easements (Lake Natoma)

PG&E also has a small distribution line (less than 50kV) that extends from the Placer-Goldhill line down to Rattlesnake Rd. The line crosses Folsom Lake near Rattlesnake Bar and extends down Rattlesnake Bar Road to the Peninsula Campground.

As with most utility easements, CDPR should not site development within these utility corridors. CDPR could possibly build new roads, trails, or utility lines across easements provided special approval is obtained.

PG&E needs vehicular access to all of its facilities for maintenance purposes. Vegetation removal is sometimes necessary for maintenance of power lines, and ground disturbance is sometimes necessary for maintenance of buried utilities. These maintenance activities could potentially impact existing vegetation and animals. Power lines and the hydropower plant visually impact the Unit. The hydropower plant also imparts some low-level noise and human activity in an area that would otherwise be remote.

City of Roseville Easements

The City of Roseville has a large-diameter raw water line that extends from the Folsom Dam. The City shares a portion of the line with the San Juan Water District. The shared 84-inch-diameter pipeline runs along the Dam from the intake at the Folsom Dam Powerhouse toward the San Juan Water District Water Treatment Plant north of Headquarters. The City of Roseville has another 60-inch-diameter pipeline that wyes off of the 84-inch-diameter pipeline just south of the Peterson Water Treatment Plant near Folsom Auburn Road. This wye is known as the Hinkle Wye.

The City of Roseville has a BOR easement for the 60-inch-diameter pipeline to cross through the Unit (Jim Mulligan. 2003.). This raw water line was installed in 2002. The water line passes through the Unit until it reaches Folsom Auburn Road. The water line then parallels Folsom-Auburn Road as it travels north and west to the Water Treatment Plant. The City of Roseville also has a 48-inch-diameter raw water line that runs parallel to the new 60-inch-diameter water line. This water line begins at Folsom-Auburn Road outside of the Unit.

CDPR should not site new development within the 84-inch and 60-inch water line easements. CDPR could possibly build new roads or utility lines across easements provided that special approval is obtained. Since the 84-inch waterline along the Dam is aboveground, it is important to limit public access to the easement. The aboveground pipeline visually impacts these areas, further discouraging development. Ground disturbance is sometimes necessary for maintenance of the buried portions of the water lines.

San Juan Water District Easements

The San Juan Water District has two easements and one parcel lease within the Unit (Ben Martinez. 2003.). As mentioned earlier, the San Juan Water District shares an 84-inch-diameter raw water line with the City of Roseville. This water line runs along the Dam from the intake at the Folsom Dam Powerhouse. The water line provides raw water for the Water District's Peterson Water Treatment Plant just north of CDPR and BOR Headquarters. The San Juan Water District plans to construct a new 84-inch-diameter line parallel to the existing line. Once construction is complete, the existing line would be removed.

The San Juan Water District also has an easement within the Unit for a 51,200-gallon potable water hydropneumatic tank on Mooney Ridge off the end of Skyway Lane. This area is located south of Granite Bay. The easement also covers the 10-inch water line that extends from Skyway Lane to the tank. The hydropneumatic tank is known as the Mooney Ridge Hydropneumatic Tank. There are no plans to expand this tank.

CDPR should not site new development within easements for the hydropneumatic tank, the hydropneumatic tank water supply line, or the 84-inch raw water line along the Dam. CDPR could possibly build new roads or utility lines across water line easements provided special approval is obtained. Since the 84-inch waterline along the Dam is above ground, it is important to limit public access to the easement. The aboveground pipeline visually impacts the area, further discouraging development. Ground disturbance is sometimes necessary for maintenance of the buried portions of the water lines.

The San Juan Water District leases a Unit parcel, Parcel C, on the north end of the Peterson Water Treatment Plant. The Water District obtained the lease of Parcel C from the BOR. The parcel is needed for the Water Treatment Plant expansion. All existing CDPR facilities on this parcel will require relocation or removal.

Western Area Power Administration Easements

The Western Area Power Administration (WAPA) is an electric power wholesaler and marketing agency operated by the federal government. The WAPA obtains power from two facilities within the Unit—the Folsom Powerhouse and the Nimbus Dam Powerhouse. Both of these hydroelectric plants are operated by the BOR. The Folsom Powerhouse provides 215,000 kW of power at peak capacity; the Nimbus Dam Powerhouse provides 17,000 kW at peak capacity.

WAPA has easements through the Unit for two overhead power lines that originate from the Folsom Powerhouse (Jose Vigil. 2003.). One of the lines originates from the Powerhouse and extends west through the Unit toward Folsom-Auburn Road. The second line originates from the Powerhouse and extends south through the Unit along the American River. The second line passes through the Unit in several locations:

- South of the Folsom Dam near the American River
- At Negro Bar where the line crosses Lake Natoma
- South of Willow Creek where the line crosses over Lake Natoma from near Folsom-Auburn Road to Mississippi Bar
- Across the south portion of the Mississippi Bar as the line extends over to the Nimbus Dam Powerhouse

CDPR should not site new development within easements for the WAPA power transmission lines. CDPR could possibly build new roads, trails, or utility lines across the easements provided that special approval from WAPA is obtained.

WAPA requires vehicular access to all of its facilities for maintenance purposes. Vegetation removal is sometimes necessary for maintenance of power lines, and ground disturbance is

sometimes necessary for maintenance of buried utilities. Power lines and hydropower plants do visually impact the Unit. The hydropower plants also impart some low-level noise.

Sacramento Municipal Utility District

Maps locating utility lines have not yet been received from SMUD. Dale Johnson with SMUD will mail the maps.

El Dorado Irrigation District

The El Dorado Irrigation District supplies water and sewer service to customers on the southeast side of Folsom Lake in El Dorado County. The Irrigation District has an easement for a raw water intake facility on the South Fork of the American River. The intake facility includes water intake pipelines, a surge tank, and a building that houses the pump station and electrical controls. The entire facility is located within the Unit on BOR property. The Irrigation District also has an easement for an existing 30-inch raw water line from the intake facility.

The intake structure is located on the South Fork of the American River near Planeta Way. The Irrigation District is planning to expand the intake facility by replacing the existing five separate intake lines with one 9-foot-diameter intake structure (Daryl Noel. 2003.). In addition, the Irrigation District will expand the capacity of the intakes and pumps from 20 million gallons per day (MGD) to 48 MGD. A new 42-inch transmission main will be added parallel to the existing 30-inch transmission main leaving the intake facility.

The intake facility expansion may impact an existing CDPR horse staging area nearby. For security purposes, the Irrigation District may request that CDPR relocate the horse staging area. CDPR should not develop any new facilities near the area in order to limit public access to the site. CDPR should not site new development within the water line easements. With special approval, CDPR may possibly be able to build roads, trails, or utilities across the water line easement, but away from the intake facility.

The intake facility will visually impact the Unit and will impart some low-level noise related to operation of the pumps. The Irrigation District needs vehicular access to the intake facility and the buried pipelines. Ground disturbance is sometimes necessary for maintenance of buried utilities.

City of Folsom

The City of Folsom has an existing 42-inch-diameter raw water intake from the Folsom Dam. As it leaves the dam, this pipeline transitions to a newer 60-inch-diameter raw water pipeline. The City of Folsom does not have any expansion plans that will impact the Unit (Gordon Turnborg. 2003.). As with all easements, CDPR should not site new development within the raw water easement. CDPR can possibly build a new road, trail, or utilities across the easement provided that special approval from the City of Folsom is obtained. Ground disturbance is sometimes necessary for maintenance of buried utilities.

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